

Ethics as Method: Repositioning Visual Communication Design in the Era of Manipulative Interfaces

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ABSTRACT: The rapid expansion of digital interfaces has positioned visual communication design as a central force in shaping user behavior through increasingly sophisticated forms of visual persuasion. Contemporary interfaces did not merely present information but actively structure choices through visual hierarchy, interaction flows, and algorithmic mediation, raising critical ethical concerns. The existing body of research remained fragmented, with inconsistent conceptualizations of persuasive versus manipulative design, limited empirical validation across platforms, and insufficient attention to cultural contexts. This study aimed to critically synthesize the literature on ethical issues in digital communication design, with a particular focus on *dark patterns*, user autonomy, and trust, while advancing a design-oriented perspective grounded in visual communication. Employing a narrative literature review (NLR) approach, the study systematically analyzed 47 selected articles from an initial corpus of 849 publications, using iterative search strategies, citation chaining, and thematic analysis to identify patterns, tensions, and gaps. The findings revealed five dominant themes: the proliferation of *dark patterns* as systemic manipulative strategies; the emergence of ethical design principles centered on transparency and user control; the limitations of current regulatory frameworks; the central role of trust as a key outcome; and the marginalization of cultural perspectives. Despite conceptual advances, the field remained methodologically fragmented and lacks integration between design practice, ethics, and regulation. This study contributed by proposing the Ethical Visual Communication Framework, which integrated visual interface design, persuasion mechanisms, user cognition, ethical principles, and regulatory context into a unified model. The framework repositioned visual communication design as a critical locus of ethical intervention, offering both theoretical advancement and practical guidance for developing more responsible, human-centered digital environments.

KEYWORDS: Dark Patterns, Ethical Design Methodology, Manipulative Interfaces, Persuasive Design, Visual Communication Design

INTRODUCTION

The rapid development of digital platforms has made visual communication design a central force in shaping user behavior, perceptions, and decision-making in a technology-mediated environment. Today's digital interface no longer functions as a passive medium for conveying information, but rather as an active system that shapes user choices through visual hierarchies, interaction flows, and algorithmic curation. The literature shows that the design of digital communication significantly influences users' autonomy and behavior patterns, making it a highly ethically relevant area of study (1), (2). This influence extends not only to usability but also to cognitive framing, where visual elements subtly direct the user's attention, preferences, and actions. Historically, the role of visual communication in influencing audiences has its roots in the tradition of visual persuasion that has developed in advertising and rhetorical practices. With the advent of interactive systems, this paradigm has transformed the field of persuasive technology, which is a system deliberately designed to influence user attitudes and behaviors through computational mechanisms (3), (4). In its more recent developments, this approach has shifted in a more problematic direction through the emergence of manipulative design practices, or dark patterns, which exploit cognitive biases and interface affordances to lead users to decisions that are not always in line with their interests (5), (6). This shift from persuasion to manipulation marks a fundamental shift in the landscape of digital design ethics.

The social implications of this phenomenon are wide-ranging. Studies have shown that manipulative interface strategies contribute to decreased user trust, weaken autonomy, and trigger negative psychological impacts such as decision-making fatigue,



anxiety, and addictive behavior (7), (8). These findings are closely related to the issues of transparency, consent, and bias embedded in design practices. The accumulation of these conditions creates a digital environment in which users are systematically exposed to covert forms of persuasion, raising fundamental questions about designers' ethical responsibility and the social consequences of their design decisions.

Although awareness of ethical issues in digital communication design is increasing, there remains a fundamental conceptual ambiguity about the boundaries between legitimate persuasion and unethical manipulation. Persuasive design is often positioned as a legitimate approach to encourage positive behavior, such as increasing user engagement or supporting healthy habits. In contrast, manipulative design deliberately disguises intent, limits choice, or exploits users' cognitive vulnerabilities (4), (9). The boundaries between these two forms of influence are not rigid; they are contextual and often blurred.

The fragmentation of concepts and definitions across disciplines further exacerbates this ambiguity. The literature presents a wide range of taxonomies of dark patterns, from broad conceptual frameworks to highly detailed classifications with dozens of manipulation categories (1), (5). Although these efforts enrich conceptual understanding, differences in terminology, scope, and methodological approaches lead to inconsistencies. As a result, this field lacks a solid theoretical foundation for clearly distinguishing between ethical persuasion and manipulation, making it difficult to analyze academic work and to implement regulations.

This fragmentation also affects practices. Designers often work in an industry context that emphasizes engagement and conversion metrics, thus creating a tension between ethical principles and business interests (Beattie et al., 2023; Fansher et al., 2018). Under such conditions, the absence of clear ethical boundaries allows manipulative practices to become normalized, ultimately harming users and weakening the principle of *informed consent*.

Although the literature shows significant progress in identifying and classifying manipulative design practices, several important gaps remain unaddressed. First, there are limitations in cross-platform and contextual empirical validation. Many dark pattern taxonomies remain theoretical and have not been adequately tested in real-world settings, thereby reducing their relevance and applicability (5). This condition limits research's ability to measure the actual impact of manipulative design across different user groups.

Second, the cultural dimension still receives less attention. Although some studies focus on specific contexts, such as India or China, much of the literature tends to ignore how cultural values, digital literacy levels, and social conditions affect perceptions of design manipulation and ethics (10). This overly generalistic approach risks ignoring the complexity of the context that precisely determines how design is understood and judged by users. Third, there is a clear gap between theoretical frameworks and design practices. Ethical principles such as transparency, autonomy, and consent have indeed been widely formulated but not operationalized in concrete design methodologies (2), (6). This gap is exacerbated by industry pressures and the lack of implementation tools and standards that can be used in real practice.

From the perspective of visual communication design, there are two additional crucial gaps. First, there is still a lack of study of visual semiotics in understanding *dark patterns*. In fact, interface manipulation often works through visual signs, symbols, and meaning structures that affect user interpretation. Second, no design methodology model explicitly integrates ethical principles in the visual communication process. Most existing approaches still focus on regulations or technical aspects rather than on visual strategies that designers can operationalize.

Based on these gaps, this research is designed to answer several interrelated questions to deepen theoretical understanding while encouraging the development of more ethical design methodologies.

1. How has the concept of ethics evolved in the design of digital communication, particularly in the shift from persuasion to manipulation? This question aims to place contemporary discourse in a broader historical and theoretical context.
2. What are the visual characteristics of *dark patterns*, and how do they manifest in interface design? This question shifts the focus from functional classification to the analysis of visual communication strategies.
3. How does visual design affect users' perceptions of trust, autonomy, and credibility in a digital environment? This question is important to understand the cognitive and affective mechanisms underlying the relationship between design and user experience.



How can design methodologies be developed to systematically integrate ethical principles into visual communication design practice? This question leads to the construction of frameworks that are not only critical but also operational and applicable in professional contexts.

THEORETICAL FRAMEWORK

Persuasion vs. Manipulation in Design

The distinction between persuasive and manipulative design was a fundamental issue in the study of contemporary digital communication design. Departing from the tradition of persuasive technology, digital systems were designed from the beginning as instruments capable of influencing user attitudes and behaviors through structured design interventions (3). In this framework, persuasion was not seen as problematic but rather as a legitimate strategy to encourage desired behaviors, such as increasing user engagement or improving the experience. From the perspective of visual communication design, persuasion worked through the arrangement of visual elements, such as hierarchy, color, typography, and gesture, that direct the user's attention and interpretation.

The boundary between persuasion and manipulation was not clear. The literature showed that manipulation occurred when the process of influencing the user was carried out in ways that disguise intent, limit choice, or exploit cognitive vulnerability (4), (9). Thus, this issue was not only technical, but also communicative. It concerned the integrity of the visual message and the extent to which the design respected the user as an autonomous subject. From a communication ethics perspective, ethical persuasion must be open and dialogical, whereas manipulation was characterized by information inequality, the concealment of intent, and coercive tendencies (11). Therefore, the design of visual communication cannot be detached from ethical responsibility, as every visual decision implicitly shapes the user's experience.

Dark Patterns as a Visual Phenomenon

Dark patterns had been widely discussed as a manipulative strategy in interface design, but these approaches were often still functional. From a visual communication design perspective, dark patterns were actually a complex visual communication phenomenon. Digital interfaces were not just technical devices, but semiotic systems that shaped meaning, directed interpretation, and influenced user actions.

Studies have shown that dark patterns developed along increasingly detailed typologies, ranging from general categories such as obstruction and sneaking to more specific forms such as misdirection, forced action, and psychological distress (1,5). These patterns did not function solely as interaction mechanisms but also as visual strategies that leverage human perceptual and cognitive tendencies. For example, visual salience was used to direct certain choices, while other options were disguised through spatial arrangement or low contrast.

By understanding *dark patterns* as visual phenomena, the analysis no longer stopped at what the interface did, but turned to how it communicates. This process placed elements such as visual hierarchy, typography, color, and layout as key factors in constructing persuasive or manipulative meaning. In this context, the interface could be understood as a visual rhetorical space where power was not explicitly present but rather insinuated through seemingly neutral design decisions.

User Autonomy and Visual Cognition

User autonomy was a central concept in the ethical evaluation of digital communication design and was closely related to the process of visual cognition. Digital interfaces work by involving perceptual and cognitive mechanisms, such as attention, information processing, and decision-making. The literature suggests that manipulative design strategies often exploit these mechanisms, especially by increasing cognitive load or distraction, thereby limiting users' reflective abilities (12).

Designing interfaces with excessive complexity, unclear information, or confusing structures reduces users' capacity to make rational decisions. Similarly, manipulation of attention through visual elements, such as striking colors, animations, or strategic positions, could lead the user to certain choices without being fully aware of it. In these conditions, the user's decisions were no longer completely autonomous but rather were influenced by a strategically designed visual structure.

From a visual communication design perspective, this emphasized the importance of clarity, readability, and cognitive accessibility. Ethical design not only presented information but also ensured that it could be understood and interpreted fairly by the user. Thus, visual cognition became the intersection between design decisions and ethical responsibility.

Ethical Framework in Digital Communication Design

The literature showed consensus on three ethical principles that underlie the design of digital communications: transparency, informed consent, and user control. These principles were considered essential for building trust and preventing manipulative practices (2). Transparency regarding communication clarity, enabling users to understand how the system worked and how their decisions were influenced by the design.

Conscious consent emphasized the user's right to make informed decisions based on clear, accessible information. In practice, this principle was often diluted, for example, through the use of formal but non-communicative consent banners (6). Meanwhile, user control concerned the ability to manage, change, or undo decisions without unnecessary hindrance.

These three principles showed that ethics in design were inseparable from the quality of visual communication. Transparency, for example, was not only about the openness of information, but also how it was presented visually. Thus, the implementation of ethics depended heavily on how those principles were translated into concrete design decisions.

Interdisciplinary perspective

The complexity of ethical issues in digital communication design demanded an interdisciplinary approach. The field of human-computer interaction (HCI) provided a foundation for understanding interaction patterns, user experiences, and the usability of systems (6). Psychology contributed to understanding cognitive biases, decision-making processes, and users' emotional responses. Meanwhile, legal studies presented perspectives on regulation, consumer protection, and formal ethical standards through frameworks such as GDPR and the Unfair Commercial Practices Directive (9).

Amid these various perspectives, visual communication design held a distinctive position. It not only dealt with functions or regulations, but with how meaning is formed and communicated through visuals. In other words, visual communication design became a meeting point for the technical, cognitive, and normative aspects of the digital experience.

The literature indicated that this interdisciplinary integration remained weak. Many studies run only partially, leaving the framework incomplete. Therefore, an approach was needed that positions visual communication design as the axis of integration, enabling the integration of aspects of user cognition, ethical principles, and regulatory content into a coherent framework.

METHODOLOGY

This study used the narrative literature review (NLR) approach to critically examine the development of discourse on ethics in digital communication design. This approach was chosen because it could address the complexity of multidisciplinary and conceptual issues while providing space for interpretive synthesis that went beyond mere summary. Narrative review enabled researchers to explore relationships among ideas, identify conceptual tensions, and formulate new frameworks of thought (12). In this context, the approach aligns with the research objectives of examining manipulative practices in design, critiquing existing ethical frameworks, and proposing an integration grounded in visual communication design.

The research process began with the formulation of a study focus that centered on ethical issues in digital communication design, with an emphasis on dark patterns, user autonomy, and trust. This focus was not immediately narrowed but allowed to develop gradually to capture the breadth of cross-field discourse. This approach reflected the narrative review's character, which was exploratory and theoretical, with research questions functioning as analytical guides rather than rigid boundaries.

The literature search was carried out strategically and iteratively, by developing key keywords into various search variations that covered related issues such as ethical UX design, persuasive technology, privacy by design, and algorithmic accountability. This strategy enabled a broader, in-depth search of relevant literature. In addition to searching the main academic databases, this study also used citation chaining techniques, both backward and forward, to identify important sources that made significant contributions to shaping the field of study (13).

The initial search returned 713 articles, which were then expanded by 136 additional sources through citation chaining, bringing the total to 849 candidate documents. The next stage was a selection process that was carried out in stages based on topic relevance, conceptual contribution, and methodological quality. From the entire document, 47 articles were selected as the most representative and relevant for in-depth analysis. This selection was not intended to achieve quantitative completeness, but rather to achieve depth of analysis, in accordance with the principle of narrative review, which emphasized conceptual significance over the number of sources (14).



Data extraction was carried out through a critical and interpretive reading of each selected article. The information collected included key concepts, methodological approaches, key findings, and theoretical and practical implications. This process did not use a rigid coding scheme but was carried out reflexively and iteratively to identify patterns, relationships, and tensions across studies. In this case, the researcher plays an active role as an interpreter, connecting the various findings into a coherent narrative (14).

The analysis stage used a thematic approach, grouping the literature into five main themes: dark patterns, ethical principles of design, regulatory frameworks, user beliefs, and cultural context. This grouping was not purely categorical; it served as a basis for comparisons, identifying similarities and differences, and uncovering contradictions in the literature. Through this process, the analysis did not stop at descriptions but evolved into a critical synthesis that highlighted the field's limitations, opportunities, and development direction.

This research also led to conceptual integration, i.e., efforts to connect various findings into a more complete framework. This synthesis emphasized the interconnectedness between visual design, persuasion mechanisms, user cognition, ethical principles, and regulatory contexts. Thus, the methodology used not only results in a mapping of the literature but also contributes to the development of a more integrative theoretical framework.

The narrative literature review approach had limitations, particularly the potential for subjectivity in selecting and interpreting the literature. To minimize this, this study maintained transparency in the search strategy, selection criteria, and analysis process. Thus, the balance between the depth of interpretation and academic rigor is maintained. This methodology enabled a more comprehensive understanding of ethical issues in digital communication design while opening space for the development of conceptual frameworks relevant to visual communication design practices.

RESULTS

Literature Mapping

An analysis of selected studies showed that research on ethics in digital communication design spanned a broad spectrum, encompassing conceptual, empirical, and regulatory dimensions. The literature not only focused on identifying manipulative practices but also increasingly integrated ethical principles, user experience, and technology governance. In general, this field was dominated by three main focuses: dark patterns, ethical design principles, and regulation and user trust.

Nevertheless, as the document showed, these developments remain marked by a gap between conceptual depth and practical implementation. Many studies offered detailed classifications, but they were not empirically tested across contexts and cultures.

Table 1. Synthesis of major studies in the literature

Study Cluster	Key Focus	Literary Characters	Key Findings	Implications
(1,6,7)	Dark patterns & manipulative design	Conceptual + empirical	Classification is increasingly complex; manipulation becomes systemic	Need detection, standardization, and design intervention
(12,15-18)	Dark patterns in the context of platforms (social media, addiction)	Empirical	Impact on behavior, addiction, and well-being	Design has a direct effect on mental health
(19-22)	AI-based manipulation & algorithms	Conceptual + emerging	AI empowers invisible manipulation	New challenges of ethics and transparency
(2,3,23)	Ethical design principles	Conceptual + empirical	Transparency, consent, and autonomy are used as the main principles	Ethics increases trust
(4,11,24)	Ethics in design and persuasion	Theoretical	The boundaries between persuasion and manipulation are unclear.	Need for a design ethics framework.



(6,9,25)	Regulatory framework	Law + policy	Regulation is evolving but lagging.	The gap between design and law
(12,23,26,27)	User trust & perception	Empirical	Trust is influenced by transparency and experience	Trust as a key indicator
(10,28-30)	Cultural & contextual studies	Contextual	Ethical perceptions are influenced by culture and literacy	Need a local approach
(31-33)	Design practitioner perspective	Empirical	Business interests pressure designers	Ethics is structural
(34-37)	Communication & criticism perspective	Theoretical	Manipulation has long existed in communication.	Dark patterns are a digital evolution.

Thematic Findings

Theme 1: Dark Patterns as Manipulation Infrastructure

Several studies have focused on dark patterns. The literature showed that this practice was no longer sporadic but had become a systemic part of digital platform design. The taxonomy had evolved from simple classifications to complex systems with dozens of categories, including obstruction, sneaking, forced action, and attention manipulation.

Interestingly, the findings suggested that the power of dark patterns lay precisely in their visual dimension. Manipulation wasn't always explicit; rather, it operated through visual structure, contrast, position, and hierarchy, shaping users' decisions before reflective awareness emerges.

Table 2. Dark patterns synthesis

Study Cluster	Main Focus	Key Findings	Design Implications
(1,5)	Dark patterns taxonomy	The classification evolved from 5 mechanisms to 64 types.	Need for standardization of definition and detection.
(6,38,39)	Identify and critique manipulative practices	Dark patterns as systemic practices in industry	Design and regulatory interventions are needed
(12,15,18)	Dark patterns on social media	The combination of manipulative patterns increases addiction & exploitation.	Strong impact on UX and well-being
(16,17)	Addictive design as a derivative of dark patterns	Engagement and algorithm-based manipulation	Mental health risks and loss of control
(19,20)	AI-enhanced dark patterns	Complexity increases through intelligent systems	Manipulation is becoming increasingly invisible
(10)	The cultural context of dark patterns	Implementation varies depending on culture and digital literacy	Need a local approach
(4,11)	Persuasion vs. manipulation	Ethical boundaries are unclear	Need a normative framework
(9)	Legal perspective of dark patterns	Regulations are not yet able to handle the complexity of design	The gap between design and law
(32,38)	Practitioner perspective	Designers are aware but pressured by business	Ethics are systemic
(34,35)	Digital communication manipulation	Obfuscation & deception as old strategies	Dark patterns are not a new phenomenon



Theme 2: Ethical Design Principles as a Response

Other studies emphasized ethical principles in response to manipulation. The main consistent principles were transparency, informed consent, and user control (2), (40). The literature also showed that these principles remained normative. Implementation in design practice was often hampered by commercial pressure and methodological limitations (4), (31).

Table 3. Ethical principles and their implementation

Study Cluster	Core Ethical Principles	Implementation Form	Key Findings	Design Implication
(2,23)	Transparency	Disclosure visual, clarity interface, explainability	Transparency increases user trust and understanding	Design should be communicative, not ambiguous
(3,24,38)	Informed Consent	Consent interface, clear opt-in, readable policies	Consent is often formal but not understood	Need a truly communicative consent design
(12,27,40)	User Control	Opt-out, reversibility, and settings control	Control increases autonomy and trust	Design should provide real choices
(4,11)	Autonomy & non-manipulation	Non-coercive design, fair choice architecture	Ethical persuasion must respect agency	Avoid coercive design bias
(28–30)	Ethical inclusivity	Contextual design, digital literacy	Ethics are influenced by culture and context	Local adaptation is needed
(31–33))	Ethical practice in industry	Ethics audit, governance design	Designers are ethically conscious but under business pressure	Ethics need organizational support
(25,41,42)	Design guidelines	Ethical design frameworks	The guide is available but not yet operational	The need for ethical design methodologies

Theme 3: Regulation-Progress and Limitations

A total of 17 studies evaluated regulatory frameworks. Regulations such as GDPR and UCPD were the main references, but were considered unable to keep up with the complexity of digital design. The main problem lay in the gap between legal norms and visual design practices. Regulations often focus on data, rather than on how design influences decisions.

Table 4. Regulation evaluation

Study Cluster	Regulatory Focus	Main Framework	Key Findings	Limitations
(9,38)	Regulation of manipulative practices	GDPR, UCPD	Provides basic user protection	Not specific to visual design
(17,25)	Digital policy & consumer protection	EU digital policy	Regulations evolve with technology	Slow implementation
(19,20)	AI & manipulation	AI governance	AI increases regulatory complexity	Low transparency
(6,12)	Design & regulatory interventions	Counter-dark patterns	Design approaches are starting to be integrated	Still experimental
(4,11)	Ethics vs law	Normative ethics	Regulations are not sufficient to address manipulation	The legal–ethical boundaries are blurred
(31,32)	Industrial practices	Self-regulation	The industry is not consistent	Business vs ethics conflict
(28–30)	Contextual regulation	Local & global	Variations in implementation across cultures	Not universal
(21,22)	Algorithm ethics	AI regulation	Focus on bias and fairness	Haven't touched UI design yet

Theme 4: Trust as a Key Indicator

Studies confirm that trust was a key indicator of design impact. Manipulative designs consistently decreased trust, while ethical designs increased it. This impact also extended to psychological aspects, such as anxiety, addiction, and cognitive fatigue.

Table 5. Design and trust

Study Cluster	Design Types	Key Findings	Impact on Trust	Implications
(32)	Manipulative (Dark Patterns)	Exploitation of cognitive bias and misdirection	Trust has decreased significantly; frustration and loss have emerged.	Manipulative designs damage long-term relationships.
(42)	Manipulative in digital products	Users feel unsafe and distrustful	Trust is down, especially in the context of transactions & emotions	Trust is a key indicator of design impact
(18)	User research-based design	Data-driven decisions increase design legitimacy	Trust increases	UX validation increases trust
(7)	Repeated manipulation	Decreased trust and autonomy	Long-term trust erosion	Reputation risk and user loyalty

Theme 5: Limited Cultural Context

The cultural dimension was the weakest theme in the literature. Only a small number of studies examined specific contexts such as India, China, and Indonesia. Findings showed that ethical perceptions were strongly influenced by culture, digital literacy, and social conditions.

Table 6. Cultural context

Study Cluster	Context	Focus of Study	Key Findings	Implications
(43)	Asia (China, cross-cultural)	Digital culture and design	Design preferences and perceptions are influenced by cultural background	Ethics and UX are not universal
(44)	Indonesia	Digital behavior & literacy	Digital literacy and platform features influence decisions	Ethical perceptions related to literacy and local context
(45)	Global (with educational context)	Culture-based UX	User experience is influenced by cultural values and digital access	Need for social context-based design
(46)	Specific groups (age, social)	Accessibility and social context	Social factors influence interaction and understanding	Design ethics related to inclusivity (7)

The findings indicated that the field had developed conceptually robustly, particularly in the classification of dark patterns and the formulation of ethical principles. Three fundamental issues remained unresolved: weak empirical validation, insufficient cultural context, and the lack of integration of design, ethics, and regulation within a coherent framework. From a visual communication design perspective, these findings lead to one important conclusion: design was not simply a technical medium but a communication practice with direct ethical consequences for users' behavior and well-being.

DISCUSSION

Tension between Ethics and Commercialization

One of the most consistent findings in the literature is the inevitable tension between ethical principles and commercial logic in digital communication design practice. On the one hand, design is required to uphold transparency, user autonomy, and honesty in communication. On the other hand, the digital industry operates within a framework of performance metrics, such as



engagement, retention, and conversion, which often encourage the use of manipulative strategies. The literature shows that designers often face a dilemma in which design decisions are not entirely within their professional control, but are influenced by organizational pressures and business interests (4), (31), (32).

In this context, practices such as dark patterns do not always emerge as individual deviations but as a structural consequence of a digital economic system that prioritizes optimizing user behavior. This context explains why ethical principles often stop at the normative level and are difficult to implement consistently in practice. In fact, as shown in several studies, there is a tendency to normalize manipulative practices in professional environments, especially when there are no clear ethical standards or strong accountability mechanisms (20), (39). Thus, ethical issues in design cannot be understood solely as individual issues but as systemic issues involving the relationships among designers, organizations, and digital platform business models.

Visual Communication Design Perspective

From a visual communication design perspective, dark patterns are essentially manipulative visual communication strategies. Digital interfaces function as a visual rhetorical medium that conveys messages, frames choices, and directs user interpretation. Unlike traditional communication media, visual rhetoric in interfaces is operational, not only persuading but also directly regulating user actions.

The literature shows that interface manipulation often occurs through seemingly neutral visual elements, such as color, hierarchy, layout, and affordances. For example, the prominence of certain buttons through color contrast or strategic placement can guide user choices without their full awareness (1). In this case, the interface does not simply present information, but constructs the reality of choice itself.

This approach requires an expanded analytical framework in visual communication design. While the focus has traditionally been on aesthetics and function, the digital context requires attention to the ethical dimensions of visual communication, including how meaning is constructed, how attention is directed, and how power is embedded within visual structures. Thus, interface design can be understood as a rhetorical practice with ethical implications, not simply a technical solution.

Methodological Weaknesses in the Literature

While the literature shows significant progress, several methodological weaknesses warrant attention. First, many studies remain conceptual in nature and lack adequate empirical validation. The increasingly complex taxonomy of dark patterns, for example, has not been fully tested in real-world contexts across platforms and user groups (5). This situation raises questions about the reliability and generalizability of existing findings.

Second, the approaches used tend to lack contextualization, particularly regarding cultural and social conditions. Most research is conducted in Western contexts or technologically advanced environments, thus underrepresenting the diversity of user experiences in other regions (10). Yet, perceptions of manipulation and ethics are heavily influenced by cultural norms, digital literacy levels, and socioeconomic conditions.

Third, there are limitations in the integration between theory and practice. Many studies have formulated strong ethical principles, but have not been able to translate them into operational design methodologies. As a result, research contributions often stop at the conceptual level without providing guidance that can be directly implemented by practitioners (2), (6). This weakness indicates a significant gap between academic discourse and design practice in the field.

Emerging Issues and Development Directions

The concept of algorithmic persuasion suggests that influence over users no longer occurs solely at a static visual level, but also through adaptive, personalized systems. Algorithms can continuously predict preferences, regulate information exposure, and shape user experiences. In this context, the boundaries between design and systems become increasingly blurred, broadening the scope of ethical responsibility (37), (47).

Another issue that has also emerged is the long-term impact on user well-being, including mental health, social relationships, and the quality of digital participation (8), (26). This issue shows that design ethics cannot be limited to micro-interactions in interfaces; it must be understood within a broader framework encompassing the social and cultural impacts of digital technology.



This discussion demonstrates that ethical issues in digital communication design lie at the intersection of design, technology, economics, and culture. Tensions between values and interests, between theory and practice, and between innovation and responsibility are central to this field.

From a visual communication design perspective, the primary contribution it can offer is the ability to read and design meaning critically. Design shapes not only what users see, but also how they perceive and act. Therefore, ethics in digital communication design is fundamentally about how communication itself is conducted—whether it liberates or restricts.

The development of a methodological framework capable of integrating visual, cognitive, and ethical dimensions is an urgent need to address the complexity of future challenges.

Although the literature on ethics in digital communication design has grown rapidly, existing studies still exhibit several fundamental gaps that limit both its theoretical maturity and practical relevance. These gaps are not only technical but also reflect a fragmented understanding of the relationship between design, ethics, and social context.

First, there is no ethical design methodology model explicitly rooted in visual communication design (DKV). Most studies promote ethical principles such as transparency, informed consent, and user control as normative frameworks (2). These principles are rarely translated into operational, visual-based design methods. The literature focuses more on human–computer interaction and legal perspectives, so the unique contributions of visual communication design—especially in meaning-making and visual strategies—have not been fully utilized. As a result, designers lack concrete methodological guidance for integrating ethics into everyday design processes.

Second, there is a significant gap in visual semiotic studies related to interface manipulation. Although dark patterns have been widely classified and analyzed, the approaches used tend to focus on function and behavior, rather than on how meaning is constructed through visual signs. Existing studies rarely examine how elements such as color, typography, composition, and visual hierarchy shape user perceptions and decisions (1). In practice, manipulation often occurs precisely at the subtle level of visual representation. The absence of this semiotic approach results in a less comprehensive analysis of dark patterns, as it ignores the essential communicative dimension of design.

Third, the literature shows a clear geographical disparity, with a lack of studies originating from the Global South, including Indonesia and Southeast Asia. Most research still focuses on Western contexts or countries with high levels of technological development. While some studies have explored the Indian or Chinese context, these are limited and do not represent the diversity of global experiences (10). This situation implies that the generalization of findings is less sensitive to cultural differences, digital literacy levels, and socioeconomic conditions. In fact, perceptions of manipulation, trust, and ethics are strongly influenced by these contexts (28), (29). Without a more contextual approach, the resulting ethical framework risks being universalistic and less applicable.

Fourth, and most fundamentally, there is a lack of complete integration between design methods, ethical theory, and regulatory frameworks. The current literature tends to develop along separate paths: design studies focus on interface practices, ethics studies emphasize normative principles, while law studies seek to regulate through regulation. While each makes important contributions, they are rarely brought together within a coherent analytical framework. For example, regulations such as the GDPR and the UCPD provide a basis for legal protection, but do not directly address how interface designs should be designed (9), (38). On the other hand, ethical principles often lack the methodological tools needed for practical implementation in the design process. This fragmentation highlights an epistemological gap in the field, where design, ethics, and regulation are treated as separate domains. In practice, all three are interconnected and simultaneously shape the user experience. Therefore, a more integrative approach is needed that can bridge these three dimensions.

These gaps underscore the need to develop a new framework oriented towards visual communication design, one that not only incorporates ethical and regulatory principles but also simultaneously considers visual, cognitive, and cultural dimensions. Such an approach is expected to make a more significant contribution to both the development of theory and the practice of responsible design.

Conceptual Framework Ethical Visual Communication Framework

Based on a critical synthesis of the literature, this study proposes an integrative model called the Ethical Visual Communication Framework (EVCF). This framework was developed in response to the fragmentation still evident in previous studies, particularly the separation between design practices, ethical principles, user cognitive processes, and regulatory contexts.



Most studies have successfully identified manipulative practices and formulated ethical principles, but have not been able to unite them in an operational framework oriented towards visual communication design. In this regard, the EVCF positions visual communication design as the central axis connecting these various dimensions.

At the core, this framework positions the visual interface as the primary space for interaction and meaning construction. The literature shows that digital interfaces are not neutral media but rather communication systems that actively shape user perceptions and actions through visual structures and interaction flows (1). In this context, visual design—through hierarchy, composition, color, and affordance—becomes the primary means of conveying meaning and influencing decisions. Thus, the interface is understood as a design layer that incorporates ethical dimensions, as every visual decision can strengthen or diminish the potential for manipulation.

The next layer is the persuasion mechanism, which represents the influence strategies embedded in the design. The literature on persuasive technology suggests that design inherently has the capacity to shape user behavior (3), (4). As demonstrated in studies of dark patterns, this mechanism can shift into a manipulative mode when used to exploit cognitive biases or to disguise choices (5), (15). Within this framework, persuasion is not seen as entirely negative, but rather as a spectrum that must be ethically evaluated based on transparency, intention, and impact on users.

The third component is user cognition, which serves as the link between design and behavioral responses. Digital interfaces operate through mechanisms of perception and information processing, including attention, memory, and decision-making. Studies show that manipulation often occurs through increased cognitive load or distraction, which reduces the user's reflective abilities (18). Therefore, within this framework, user cognition is understood as an aspect that must be protected through clear, legible, and non-misleading design. User autonomy can only be realized if the design supports adequate understanding, not the other way around.

Above these three components, this framework places ethical principles as the normative foundation that guides design practice. The literature consistently emphasizes transparency, informed consent, and user control as core principles (2). In the EVCF, these principles are not treated as abstractions, but rather as operational criteria that must be embodied in visual forms and interactions. Transparency, for example, must be reflected in visual clarity; consent must be conveyed in understandable terms; and user control must be facilitated through flexible, non-restrictive design.

The outermost layer is the regulatory context, which includes the legal and policy frameworks governing digital design practices. Regulations such as the GDPR and the Unfair Commercial Practices Directive provide a basis for protection against manipulative practices (9), (38). The literature also shows that regulations often lag behind technological developments and have not fully reached the visual dimension in interface design. Within this framework, regulations are understood as systems that must interact with design practices rather than serve as external boundaries. In other words, design ethics requires institutional support to be consistently applied.

The primary advantage of the Ethical Visual Communication Framework lies in its integrative nature and its focus on visual communication design. This framework does not separate design, ethics, cognition, and regulation; rather, it views them as an interconnected system. By placing visual communication at the intersection, this framework provides a theoretical contribution that expands approaches previously dominated by technical or legal perspectives.

This framework also has practical implications. It can serve as a basis for developing design methodologies that incorporate ethical considerations from the earliest stages of the design process, rather than as a final evaluation. Thus, the EVCF serves not only as an analytical tool but also as a guide for more responsible design practices.

Ultimately, this framework emphasizes that ethics in digital communication design is a matter of the integrity of visual communication. The validity of a design is determined not only by its effectiveness in achieving its goals but also by the extent to which it respects user autonomy, conveys information honestly, and operates within a framework of accountable values.

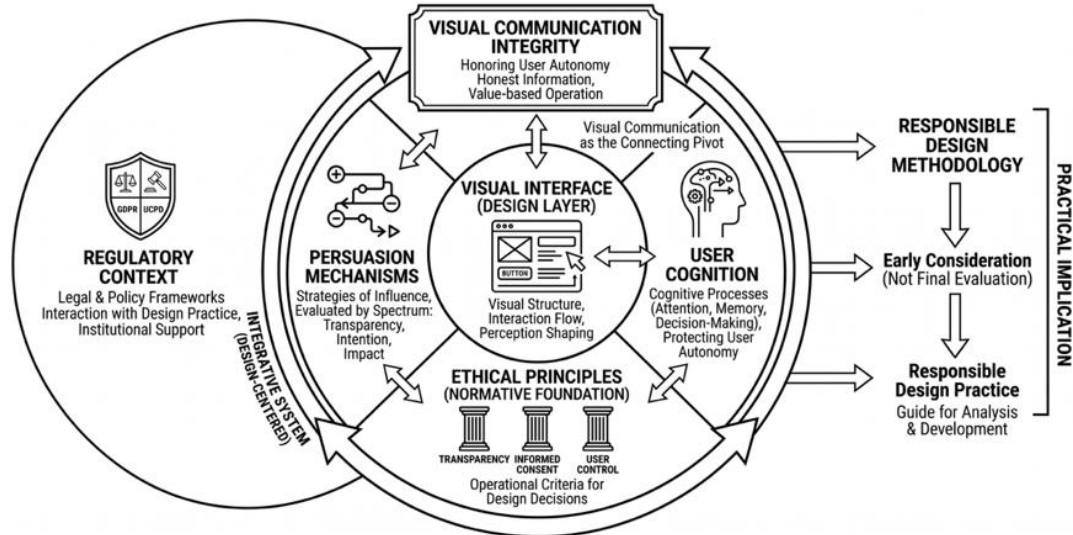


Figure 1. Ethical visual communication framework

Implications

Theoretical Implications

The findings of this study contribute to strengthening the theoretical framework in digital communication design studies by placing visual communication design (DKV), human-computer interaction (HCI), and ethics in a single analytical unit. Until now, these three fields have tended to develop separately: HCI focuses on usability and user experience, ethics on normative principles, and DKV on aspects of visual representation. The literature shows that this separation actually hinders a complete understanding of manipulative practices in digital interfaces (2), (6).

Through this synthesis, this research confirms that ethical issues in design cannot be separated from the way visuals shape meaning and guide behavior. Manipulation in interfaces often occurs not through explicit instructions, but rather through visual structures that implicitly influence user perception (1). Thus, Visual Communication Design is no longer merely an adjunct to system design, but a central element in understanding how ethics operate in digital experiences.

The main theoretical implication of this research is a shift in perspective on design: from a technical activity to a value-laden communication practice. This approach opens the way for the development of a more integrative theory that combines visual, cognitive, and normative dimensions within a single conceptual framework.

Practical Implications

Practically, this research provides a basis for developing more concrete ethical design guidelines that can be applied in professional practice. The literature shows that principles such as transparency, informed consent, and user control have been widely formulated but often not translated into operational design decisions (2). This gap makes it difficult to consistently implement ethical design practices.

The proposed framework provides a practical implication for a design approach that consciously avoids manipulative strategies or anti-dark patterns. This approach includes, among other things, presenting clear and non-misleading information, using a fair visual hierarchy, and providing equal choice for users. Design is no longer solely oriented toward effectiveness, but also toward honest communication and the protection of user autonomy.

Ethical design practices need to be supported by internal organizational mechanisms, such as ethics audits, user-based evaluations, and cross-disciplinary collaboration. The literature shows that commercial pressures often drive the use of manipulative strategies (31), (32). Therefore, changes are insufficient at the individual level; they must also occur within the systems and organizational culture that govern design practices.

Policy Implications

This research also demonstrates the need to strengthen design-based regulatory approaches in regulating digital communication practices. Existing legal frameworks, such as the GDPR and the Unfair Commercial Practices Directive, have

provided an important basis for user protection, particularly regarding data and privacy (9), (38). These regulations still have limitations in covering the visual and interaction dimensions of interfaces.

The emerging policy implication is a shift from regulation focused on content and data to one that also considers how design influences user behavior. This can be achieved by developing design standards that prohibit manipulative practices, establish principles of visual transparency, and ensure that users clearly understand consent and control mechanisms.

The development of artificial intelligence-based technologies demands more adaptive, responsive regulations. Dynamic and personalized systems pose new challenges for accountability and transparency (21), (22). Therefore, future policies should involve collaboration among designers, researchers, and policymakers to develop a regulatory framework that is not only reactive but also preventive. The policy implications of this research emphasize that design is not simply an object to be regulated, but also an instrument for realizing ethical values in digital practices

CONCLUSION

This study presents a critical synthesis of the literature on ethics in digital communication design, integrating manipulative practices, user cognition, ethical principles, and regulatory frameworks into a single analysis. The study demonstrates that the field has progressed significantly, particularly in identifying and classifying dark patterns and formulating ethical principles such as transparency, informed consent, and user control. Several limitations, including conceptual fragmentation, weak regulatory implementation, and a lack of empirical validation and sensitivity to cultural context, still constrain this progress.

The findings of this study confirm that digital communication design cannot be understood as a neutral technical practice. Digital interfaces are visual communication spaces that actively shape how users perceive, choose, and act. In this context, ethics is not an external addition, but rather an inherent part of the design process itself. Various studies have shown that manipulative design practices, particularly through dark patterns, directly impact trust, weaken autonomy, and lead to psychological consequences such as cognitive fatigue and addictive tendencies. Conversely, designs that prioritize clarity, transparency, and user respect have been shown to strengthen trust and create more sustainable experiences.

In this context, this study proposes the Ethical Visual Communication Framework to integrate the dimensions of design, cognition, ethics, and regulation into a coherent conceptual framework. By placing visual communication design at the center, this framework helps bridge the previously separate approaches to technical and normative aspects. This framework not only enriches theoretical understanding but also opens the door to the development of more operational and context-specific design methodologies.

In the future, several research directions need to be developed. First, more robust empirical studies are needed to test and validate the formulated taxonomy and ethical framework, particularly across platforms and user groups. Second, expanding the study to a Global South context is crucial to provide a more diverse, contextual perspective, given that cultural differences and digital literacy influence perceptions of design ethics. Third, a visual semiotic approach needs to be further developed to understand how manipulation operates at the level of representation and meaning in digital interfaces.

Developments in artificial intelligence and algorithmic systems require renewed attention to issues of transparency, accountability, and increasingly complex forms of persuasion. Adaptive and personalized systems have the potential to amplify manipulative practices that are difficult to detect, necessitating a more comprehensive and interdisciplinary ethical approach.

Ultimately, the future of digital communication design depends heavily on the field's ability to balance innovation with responsibility. Design should be judged not only by its effectiveness but also by its integrity as a communication practice. By placing ethics at the core of the design process, it is hoped that the resulting digital environment will not only be efficient but also fair, transparent, and respectful of the user's dignity.

REFERENCES

1. Meirezaldi O. Dark Patterns Reconsidered: A Cross-Taxonomic and Conceptual Mapping for Ethical Interface Design. *Telaah Bisnis*. 2025;26(1):11. doi:10.35917/tb.v26i1.586
2. Zaheer S. Ethical Ux Design Preventing Manipulative Interfaces and Promoting User Trust. *Int J Eng Technol Res Manag*. 2019;3(10):43–51. doi:https://doi.org/10.5281/zenodo.15251711.
3. Benner D, Schöbel S, Janson A, Leimeister JM. How to Achieve Ethical Persuasive Design: A Review and Theoretical Propositions for Information Systems. *AIS Trans Hum-Comput Interact*. 2022;14(4):548–77. doi:10.17705/1thci.00179



4. Sánchez Chamorro L, Bongard-Blanchy K, Koenig V. Ethical tensions in UX design practice: exploring the fine line between persuasion and manipulation in online interfaces. In: Proceedings of the 2023 ACM designing interactive systems conference. 2023. p. 2408–22.
5. Nie L, Zhao Y, Li C, Luo X, Liu Y. Shadows in the Interface: A Comprehensive Study on Dark Patterns. In: Proceedings of the ACM on Software Engineering. 2024. p. 204–25. doi:10.1145/3643736
6. Gray CM, Gunawan JT, Schäfer R, Bielova N, Sanchez Chamorro L, Seaborn K, et al. Mobilizing research and regulatory action on dark patterns and deceptive design practices. In. 2024. p. 1–6.
7. Spasovski M, Jönsson O. Automated “Dark Patterns” in User Experience (UX): Exploring AI-Driven Manipulative Design. Malmö University; 2025.
8. Pérez E. Unethical Design in TikTok and Its Connection to Surveillance Capitalism and Collective Intelligence. *Adv Mark Cust Relatsh Manag E-Serv Book Ser.* 2024;135–64. doi:10.4018/979-8-3693-6945-6.ch006
9. Trzaskowski J. Manipulation by design. *Electron Mark.* 2024;34(1). doi:10.1007/s12525-024-00699-y
10. Sa R. Hidden Traps in Digital Financial Services: Exploring Dark Patterns and Their Impact on Users. *Asia Pac Econ Manag Rev.* 2025;2(6). doi:10.62177/apemr.v2i6.981
11. Spahn AA. And Lead Us (Not) into Persuasion...? Persuasive Technology and the Ethics of Communication. *Sci Eng Ethics.* 2012;18(4):633–50. doi:10.1007/S11948-011-9278-Y
12. Mildner T, Cooney OM, Meck AM, Bartl M, Savino G, Doyle PR, et al. Listening to the Voices: Describing Ethical Caveats of Conversational User Interfaces According to Experts and Frequent Users. *Proc 2024 CHI Conf Hum Factors Comput Syst.* 2024;1–18. doi:10.1145/3613904.3642542
13. Paré G, Kitsiou S. Methods for literature reviews. In: *Handbook of eHealth Evaluation: An Evidence-based Approach [Internet].* University of Victoria; 2017.
14. Zarei A, Feiz D, Moradi H. Promoting consumer loyalty and resilience to negative information through brand identity sub-components: an empirical investigation in the luxury electronics goods. *J Islam Mark.* 2020. doi:10.1108/jima-02-2020-0056
15. Ukgoda H. The Dark Side of Social Media: Analysing Dark Pattern Combinations and Their Impacts. *IJIE Indones J Inform Educ.* 2024;8(2):101. doi:10.20961/ijie.v8i2.91666
16. Pérez EA. Unethical Design in TikTok and Its Connection to Surveillance Capitalism and Collective Intelligence. In: *Data-Driven Governance Through AI, Digital Marketing, and the Privacy Interplay.* IGI Global Scientific Publishing; 2025. p. 135–64.
17. Ye X. Dark patterns and addictive designs. *Weizenbaum J Digit Soc.* 2025;5(3).
18. Mildner T, Savino GL. Ethical User Interfaces: Exploring the Effects of Dark Patterns on Facebook. *Hum Factors Comput Syst.* 2021. doi:10.1145/3411763.3451659
19. Chromik M, Eiband M, Völkel ST, Buschek D. Dark Patterns of Explainability, Transparency, and User Control for Intelligent Systems. In: *Vol. 2327.* 2019.
20. Deligöz K. Consumer manipulation with artificial intelligence: Dark patterns and hidden techniques. In: *Consumer, Marketing, AI: Dark Sides and Ethics, March.* 2025.
21. Polyzos D, Koliatsas I. Digital ethics: the dark side of social media algorithms. *Open Sch J Open Sci.* 2025;8(2). doi:10.12681/osj.43793
22. Yazici T. Artificial Intelligence Ethics in Communication: Challenges and Future Perspectives. *Navig Mod Digit Commun Ethics Law.* 2026;33–74.
23. Rahman P, Adaji I. Ethics in persuasive technologies: a systematic literature review. In. 2024. p. 106–18.
24. Shilton K. This is an intervention: Foregrounding and operationalizing ethics during technology design. In: *Emerging Pervasive Information and Communication Technologies (PICT) Ethical Challenges, Opportunities and Safeguards.* Springer; 2013. p. 177–92.
25. Ansgar K, Perez VE, Helena W, Menisha P, Sofia C, Marina J, et al. Editorial responsibilities arising from personalization algorithms. *ORBIT J.* 2017;1(1):1–12.



26. Seceleanu A, Garabet BI, Sunda I. Digital Communication in the Age of TikTok: Ethical, Psychological, and Socio-Political Dimensions. In: Navigating Modern Digital Communication Ethics and Law. IGI Global Scientific Publishing; 2026. p. 125–82.
27. Ou M, Zheng H, Li B, Luo C. The Dark Side of Algorithms: How Ethical and Privacy Considerations Affect Individuals' Engagement With Health Information on Social Media? *Int J Commun.* 2026;20:24–24.
28. Johar SS, Husaini NA, Kamil NAM, Heng FL, Zaidi NDIM, Hoong LP, et al. Ethical and Civilizational Perspectives on Digital Technology and Social Value: A Conceptual Review. *Indones J Community Serv.* 2025;4(2):96–103.
29. Sari H, Nurhayati AN, Sulaeman S, Pajarianto H, Asrifan A. Language and Digital Rights. *Adv Comput Intell Robot Book Ser.* 2025;309–38. doi:10.4018/979-8-3373-5781-2.ch012
30. Afif ZA, Viery A, Yuliana ME. Etika Teknologi Informasi dalam Komunikasi Digital: Pilar Moral di Era Siber. In. 2025. p. 1306–11.
31. Beattie A, Lacey C, Caudwell C. "It's like the Wild West": User Experience (UX) Designers on Ethics and Privacy in Aotearoa New Zealand. *Des Cult.* 2024;16(1):63–82.
32. Fansher M, Chivukula SS, Gray CM. # darkpatterns: Ux practitioner conversations about ethical design. In. 2018. p. 1–6.
33. Maris E, Wagman KB, Bergmann R, Bragg D. Tech worker perspectives on considering the interpersonal implications of communication technologies. *Proc ACM Hum-Comput Interact.* 2023;7(GROUP):1–22.
34. Pollach I. A typology of communicative strategies in online privacy policies: Ethics, power and informed consent. *J Bus Ethics.* 2005;62(3):221–35.
35. Monahan T. Built to lie: Investigating technologies of deception, surveillance, and control. *Inf Soc.* 2016;32(4):229–40.
36. Paveau MA. Éthique du discours numérique. *Linguas E Instrum Linguísticos Brés.* 2016;37:177–210.
37. Lin J, Chen C. The epistemic ethical concerns involving algorithms in intelligent communication. *Teknokultura Rev Cult Digit Mov Soc.* 2023;20(2023):27–36.
38. Gray CM, Chivukula SS, Lee A. What Kind of Work Do " Asshole Designers" Create? Describing Properties of Ethical Concern on Reddit. In. 2020. p. 61–73.
39. Gray CM, Kou Y, Battles B, Hoggatt J, Toombs AL. The dark (patterns) side of UX design. In. 2018. p. 1–14.
40. Rahman P, Adaji I. Evaluating user perceptions of trust in persuasive technology: A comparative study. In. 2025. p. 122–30.
41. Serrano-Tellería A. INNOVATIONS IN MOBILE INTERFACE DESIGN: AFFORDANCES AND RISKS. *El Prof Inf.* 2017;26(2).
42. Lee KS, Wei H. Design factors of ethics and responsibility in social media: A systematic review of literature and expert review of guiding principles. *J Media Ethics.* 2022;37(3):156–78.
43. Nourian L, Naikar VH, Shinohara K, Tigwell GW. Investigating the Intersection of Cultural Design Preferences and Web Accessibility Guidelines with Designers from the Global South. In: Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems [Internet]. New York, NY, USA: Association for Computing Machinery; 2025. (CHI '25). Available from: <https://doi.org/10.1145/3706598.3714326> doi:10.1145/3706598.3714326
44. Muharam H. The Ethics of Persuasion: Cognitive Bias and Platform Design in Emerging E Commerce Markets. *Moneta J Econ Finance.* 2024;2(1):37–54.
45. Wang M, Zhao Z. A Cultural-Centered Model Based on User Experience and Learning Preferences of Online Teaching Platforms for Chinese National University Students: Taking Teaching Platforms of WeCom, VooV Meeting, and DingTalk as Examples. *Systems.* 2022;10(6):216. doi:10.3390/systems10060216
46. Amouzadeh E, Dianat I, Faradmal J, Babamiri M. Optimizing mobile app design for older adults: systematic review of age-friendly design. *Aging Clin Exp Res.* 2025 Aug 14;37(1):248. doi:10.1007/s40520-025-03157-7 PubMed PMID: 40804492; PubMed Central PMCID: PMC12350549.

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